

BOOK REVIEWS

The Cactus and its Home¹

There is scarcely a book in English on the home life of the cacti. In fact most books on the family have been altogether taxonomic, which to the general public is the least interesting thing about them.

Doctor Shreve, who for years has studied the ecology and cultivation of these curious plants in their home, has written a small book on just those phases of them that the average succulent fancier will most appreciate.

How they live and how to grow them, may sound like pretty meagre material to fill even a small book. But it involves a long familiarity with the physiology of desert plants and the ability to translate that information into practical cultural directions. You will find them in this book, also specific hints on propagation,—always a ticklish business with succulents.

Some of the fascinating Indian customs which Standley records about Mexican cacti, Shreve does not mention, but there are notes in the book on the curious relation between some cacti and birds, notably in the giant cactus.

There are many illustrations and a very useful compilation of the cactus flora of the chief desert states. The book loses by having no index, no list of its 43 illustrations, no explanation of its very good distribution map. The lack of all of these puts a quite unnecessary burden on the user. The book, in spite of this, will have to be in the library of most cacti lovers, because its authority and scholarship are unquestioned.

NORMAN TAYLOR

Suksdorf on the genus *Amsinckia*²

There have been several interesting episodes in species-making in the United States. As two examples, I may cite the work of Greene, who revised the western species of *Ptelea* in

¹ Shreve, F. *The Cactus And Its Home*. Pp. 1-195, Figs. 1-43, a frontispiece and a distribution map. Williams and Wilkins Co. Baltimore, Md. 1931. Price \$3.00.

² Suksdorf, Wilhelm. *Untersuchungen in der Gattung Amsinckia*. *Werdenda* 1: 47-113. Dec. 31, 1931.

1906, publishing as new 55 species out of a total of 59, and that of Small and Alexander, who recognize 96 species of *Iris* in the southern States, of which 88 are accredited to one or the other of the two authors. Now we have Suksdorf's contribution, which scarcely equals these two cases in proportion of new species but far exceeds them in mass. Asa Gray recognized six species from North America in 1878; Howell knew two from the Northwest in 1901; Piper had three from Washington in 1906; Wootton and Standley had none from New Mexico; Tidestrom reported four from Utah and Nevada, and Jepson recognized seven from California. Suksdorf has examined the same material to which Jepson had access and reports ten from Washington, eleven from Oregon, six from Nevada, one from New Mexico, and no less than 199 from California. Of his total bulk of 233 species, no less than 198 are described as new!

I do not intend to criticize Suksdorf. On the contrary, I believe that no taxonomist ever makes new species just to gratify his personal vanity and that every new description represents the author's sincere and considered opinion. Suksdorf says in his introduction (my translation): "The richness of *Amsinckia* surpassed all my expectations. My work will scarcely satisfy any botanist; I am not satisfied with it myself, but believe that it will lead to a better understanding of the genus. The great number of new species does not speak well for my work and will produce a lack of confidence. But in my opinion it could not be handled otherwise."

Fashions change in species-making as in everything else. Suksdorf may or may not be justified in making so many species, and only a specialist can affirm one view or the other and then only after long and patient study. The one important principle which appears from such studies as Suksdorf's is this, that no one has as yet discovered any rule by which the scope of a species may be measured or determined. The taxonomist can catalog the morphological characters of a group, the ecologist can study the relation of these characters to environment, and the geneticist can count chromosomes and determine the course of evolution within the group, but none of them can finally decide on the scope of a species, either in time, as measured by its evolution, or in structure, as measured by its morphology. We are all governed primarily by usage in taxonomy. We accept the state-

ments in the manual on our bookshelf about the species of *Quercus* or *Eupatorium*, having confidence in its author, but we would probably arrive at a different conclusion if we gave these groups long and patient study ourselves. That is how Brainerd was able to improve our knowledge of *Viola*, how Sargent gave us new ideas on *Crataegus*; how Bicknell increased the southern species of *Sisyrinchium* to 53; how Small reduced them to fifteen. Whether all these new species of *Amsinckia* will be maintained is a different question, but if they are reduced, their reduction will again be an expression of opinion based on careful study.

In conclusion, let me give a definition which may make one more lenient in criticizing Suksdorf's work or any other similar study. A species is a group of one or more individuals which in your opinion deserves a binomial name.

H. A. GLEASON

FIELD TRIPS OF THE CLUB

LICHEN OBSERVATIONS ON WINTER WALKS OF THE CLUB

Winter field meetings of the Torrey Botanical Club, in February and March, brought out a good attendance in spite of weather varying from moderate and sunny to snow and sleet. On these trips the study of lichens proved interesting not only for themselves, but because the usual subjects for observation in the flowering season were absent. Most members and guests showed keen interest in these plants, which might take a place in outdoor nature study on a par with higher organisms if there was a popular guide for them, which, the chairman hopes, the Club may be able to publish.

On Sunday, Feb. 12, a party of 28, led by the chairman of the field committee, rambled in the Bear Mountain State Park, including the granite knobs in the meadow at Iona Island, where the prickly pear cactus colonies were seen; Doodletown Brook and Valley, and the west end of Dunderberg Mountain. In the brook, objects of interest were the aquatic lichen, *Dermatocarpon miniatum aquaticum*, growing on the stones among liverworts (*Conocephallum* and *Pellia*) and three plants of the Maidenhair Spleenwort, *Asplenium Trichomanes*, growing on a band of Grenville limestone within the gneiss.